



WELLHEAD PROTECTION -- WHAT IS IT ?

Wellhead Protection is a program designed to protect the quality of public drinking water supplies obtained from community water wells. The term "Wellhead" refers to the part of a water well that is present at the surface. A "Drinking Water Protection Area" is the surface and subsurface area surrounding a water well. Formerly, these areas were referred to as "Wellhead Protection Areas", but the term "Drinking Water Protection Area" better describes the protection of the resource itself.

The Wellhead Protection Program, which has been in existence since 1989, is now a component of DEQ's new Drinking Water Protection Program. The Drinking Water Protection Program, designed to follow the work done under the Source Water Assessment Program, takes drinking water protection a step further than the former programs by means of public education, the introduction of drinking water protection ordinances, and the establishment of drinking water protection committees made up of local volunteers that promote various drinking water protection activities as they see fit for their community. Previously, under the Source Water Assessment Program, DEQ set up protection areas around every water system in the state and located all potential sources of contamination in these areas. Each water system received a report that shows the locations of every potential contamination source that could potentially contaminate the water source. The report also states how susceptible each water system is to contamination and is available for public viewing at the water system's office.

WHY IS A WELLHEAD PROTECTION PROGRAM NEEDED?

Because two-thirds of the population of Louisiana depends on ground water for drinking water, it is important to take steps to protect this valuable resource. Since ground water is easier to contaminate than it is to cleanup, an ounce of prevention is worth far more than a pound of cure. The Wellhead Protection Program helps communities protect the quality of their water supply.

CONTAMINATION - WHERE DOES IT COME FROM ?

There are many significant potential sources of contamination:

- ◆Septic Tanks,
- ◆Urban Runoff,
- ◆Pesticides,
- ◆Industrial Impoundments,

- ◆ Underground Gas Tanks,
- ◆ Landfills,
- ◆ Fertilizers,
- ◆ Animal Waste Lagoons,
- ◆ Industrial Facilities,
- ◆ Hazardous Waste Sites,
- ◆ Household Waste,

to name a few. The improper management of these potential sources can lead to ground water contamination.

HOW DOES THE CONTAMINATION GET INTO THE GROUNDWATER?

Ground water is stored in and moves through underground sand and gravel formations called "aquifers." Aquifers are saturated with water that seeps into the ground in the area where the aquifer is close to the earth's surface. These locations are called "recharge areas." Contamination can migrate into the aquifers from poorly managed sources of pollution. Contamination can move through the aquifer and eventually reach a water well that supplies drinking water to a community. When this happens, the water may no longer be suitable for consumption and the well sometimes has to be abandoned and replaced, costing up to hundreds of thousands of dollars. There were six cases of benzene (a chemical found in gasoline) contamination of public supply wells in Louisiana in 1992.

HOW DOES THE WELLHEAD PROTECTION PROGRAM WORK ?

The Louisiana Department of Environmental Quality's (DEQ) Office of Environmental Assessment, Environmental Evaluation Division administers the Wellhead Protection Program. The steps below explain how:

Step 1.

DEQ delineates an area around the wellhead called a "drinking water protection area." This area ranges from 1000 foot to a one-mile radius around the well, depending on the well depth.

Step 2.

An inventory is conducted of all significant potential sources of contamination in the protection area. Significant potential sources of contamination are any places that use chemicals or other harmful substances that could contaminate drinking water if improperly managed.

Step 3.

DEQ assists the community in adopting a Management Plan to minimize the potential risks to public water supplies. The Management Plan can include ordinances, source prohibitions, and education of the public. Signs are posted marking the boundaries of the drinking water protection area.

Step 4.

DEQ assists the community in establishing a Contingency Plan to provide emergency response procedures, which may become necessary in the event of a partial or total loss of public water supply service.

Step 5.

The local community is educated on drinking water protection. Public education can be in the form of distribution of brochures, notices in water bills, presentations by DEQ to local schools or civic organizations, or formation of a local committee to promote drinking water protection activities.

TWO STEPS AHEAD.....

Since the completion of the statewide Source Water Assessment Program in May of 2003, all public water systems already have steps 1 and 2 completed by DEQ. Completion of the remaining steps will help protect the water supply and the water system will be recognized by the state as having an approved Wellhead Protection Program.

HOW TO GET MORE INFORMATION

Contact the DEQ Aquifer Evaluation and Protection Section at:

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